

We claim:

1           1.     A method of completion of a well, comprising:  
2                     attaching at least one auxiliary conduit or cable to a downhole assembly;  
3                     providing an upper connection to said conduit or cable;  
4                     running in said downhole assembly with said cable or conduit to a desired  
5 location in the well;  
6                     tagging into said downhole assembly and said upper connection of said  
7 conduit or cable downhole on at least one subsequent trip into the well with a tubular having at least  
8 one auxiliary cable or conduit extending along its length from the surface;  
9                     communicating through said auxiliary cable or conduit between the surface  
10 and the downhole assembly on a real time basis.

11           2.     The method of claim 1, further comprising:  
12                     tagging into said downhole assembly on a subsequent trip with production  
13 tubing having at least one auxiliary cable or conduit which is also connectable to said upper  
14 connection of said cable or conduit on the downhole assembly;  
15                     communicating during production through auxiliary cable or conduit between  
16 the surface and the downhole assembly on a real time basis.

17           3.     The method of claim 1, further comprising:  
18                     plugging said upper connection during said running in of the downhole  
19 assembly and auxiliary cable or conduit;  
20                     unplugging said upper connection with another trip into the well.

21           4.     The method of claim 1, further comprising:  
22                     performing said tagging in without rotation.

1           5.     The method of claim 4, further comprising:

2                     selectively locking said connections resulting from said tagging in.

1           6.     The method of claim 1, further comprising:

2                     configuring said auxiliary conduit or cable adjacent said downhole assembly  
3     in a manor which permits monitoring or altering adjacent well conditions or the functioning of the  
4     downhole assembly.

1           7.     The method of claim 6, further comprising:

2                     using a gravel pack screen and packer for said downhole assembly extending  
3     said cable or conduit through said packer to said upper connection.

1           8.     The method of claim 7, further comprising:

2                     delivering gravel through said at least one of conduits.

1           9.     The method of claim 1, further comprising:

2                     using fiber optic as said cable.

1           10.    The method of claim 9, further comprising:

2                     using said fiber optic to measure strain on said downhole assembly.

1           11.    The method of claim 1, further comprising:

2                     using said auxiliary cable or conduit to operate at least a portion of said  
3     downhole assembly.

1           12.    The method of claim 7, further comprising:  
2                        running in an outer jacket, assembled over said cable or conduit, together with  
3   said screen and packer.

1           13.    The method of claim 7, further comprising:  
2                        running in at least one fiber optic cable on said screen;  
3                        using said fiber optic to determine fluid conditions flowing to said screen.

1           14.    The method of claim 13, further comprising:  
2                        providing a winding inlet channel for inflow to said screen;  
3                        locating said fiber optic in said channel.

1           15.    The method of claim 1, further comprising:  
2                        running said auxiliary conduit or cable in a U-shaped path so as to provide a  
3   pair of upper connections;  
4                        extending said U-shaped path to the surface as a result of said tagging, an  
5   auxillary conductor or cable attached to a tubular run in from the surface, into each of said upper  
6   connections on a subsequent trip into the wellbore.

1           16.    The method of claim 1, further comprising:  
2                        running at least one cable and at least one conduit auxiliary to the downhole  
3   assembly;  
4                        securing said cable to said conduit.

1 17. The method of claim 1, further comprising:  
2 providing an external through on said downhole assembly;  
3 mounting a fiber optic cable in said through.

1 18. The method of claim 17, further comprising:  
2 securely mounting said fiber optic cable to said through to allow real time  
3 sensing of strain on the downhole assembly.

1 19. The method of claim 1, further comprising:  
2 mounting a fiber optic cable inside said conduit.

1 20. The method of claim 7, further comprising:  
2 using a fiber optic cable to monitor the compaction of gravel per unit length  
3 of screen;  
4 using a plurality of conduits for gravel deposition at different locations of said  
5 screen;  
6 sensing downhole conditions during production through said screen using said  
7 fiber optic cable.